

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1                   1.       (currently amended): A thin-film magnetic head on a substrate having a  
2 slider surface comprising:  
3                   a first magneto-resistive effect element configured to detect a magnetic signal  
4 from a magnetic recording medium; and  
5                   a second magneto-resistive effect element disposed adjacent to the first magneto-  
6 resistive effect element and configured to measure an amount of lapping of the first magneto-  
7 resistive effect element along the slider surface,  
8                   the first magneto-resistive effect element comprising:  
9                   a first magneto-resistive effect film;  
10                   an upper shield film disposed above the first magneto-resistive effect film;  
11               and  
12                   a lower shield film disposed below the first magneto-resistive effect film,  
13                   the second magneto-resistive effect element having a structure that is substantially  
14 the same as that of the first magneto-resistive effect element.

1                   2.       (previously presented): The thin-film magnetic head according to claim 1,  
2 wherein said first magneto-resistive effect element and said second magneto-resistive effect  
3 element each include a magneto-resistive effect film, a first electrode, and a second electrode,  
4 and wherein the magneto-resistive effect film is disposed between the first electrode and the  
5 second electrode, and wherein the first magneto-resistive effect element and the second magneto-  
6 resistive effect element have substantially similar shapes.

3 and 4.       (canceled)

1                   5.       (previously presented): The thin-film magnetic head according to claim 1,  
2 wherein said substrate is formed of a non-magnetic material of  $\text{Al}_2\text{O}_3$ -TiC or SiC.

1                   6.       (currently amended): A thin-film magnetic head on a substrate having an  
2 air bearing surface including:

3                   a first magneto-resistive effect element configured to detect a magnetic signal  
4 from a magnetic recording medium;

5                   a first connection terminal configured to detect the magnetic resistance of said  
6 first magneto-resistive effect element;

7                   a second magneto-resistive effect element adjacent to said first magneto-resistive  
8 effect element and configured to measure an amount of lapping of the first magneto-resistive  
9 effect element along the slider surface; and

10                  a second connection terminal configured to detect the resistance of said second  
11 magneto-resistive effect element,

12                  the first magneto-resistive effect element comprising:

13                       a first magneto-resistive effect film;

14                       an first shield film disposed adjacent a first side of the first magneto-  
15 resistive effect film; and

16                       a second shield film disposed adjacent a second side of the first magneto-  
17 resistive effect film opposite from the first side,

18                  the second magneto-resistive effect element having a structure that is the same as  
19 that of the first magneto-resistive effect element.

1                   7-12. (canceled)

1                   13.     (currently amended): A thin-film magnetic head comprising:  
2                   a first magneto-resistive effect element configured to read a magnetic signal  
3 recorded on a magnetic disk and having an end portion that is configured to be exposed to an air  
4 bearing surface; and  
5                   a second magneto-resistive effect element adjacent to the first magneto-resistive  
6 effect element and configured to measure an amount of lapping of the first magneto-resistive  
7 effect element at the air bearing surface,  
8                   the first magneto-resistive effect element comprising:  
9                   a first magneto-resistive effect film;  
10                  an first shield film disposed adjacent a first side of the first magneto-  
11 resistive effect film; and  
12                  a second shield film disposed adjacent a second side of the first magneto-  
13 resistive effect film opposite from the first side,  
14                  the second magneto-resistive effect element having a structure substantially the  
15 same as that of the first magneto-resistive effect element..

1                   14-16. (canceled)

1                   17.     (previously presented): The thin-film magnetic head according to claim 1,  
2 further comprising an inductive element coupled to the first magneto-resistive effect element and  
3 configured to write information on a magnetic recording medium.

1                   18.     (previously presented): The thin-film magnetic head according to claim 1,  
2 wherein an end portion of the first magneto-resistive effect element constitutes a portion of the  
3 slider surface.

1                   19 and 20.     (canceled)

1                   21.     (previously presented): The thin-film magnetic head according to claim 6,  
2     wherein a resistance characteristic of the second magneto-resistive effect element is configured  
3     to change as a portion of the second magneto-resistive effect element is removed during lapping.

1                   22.     (canceled)

1                   23.     (currently amended): A thin-film magnetic head on a substrate having a  
2     slider surface comprising:

3                   a first magneto-resistive effect element configured to detect a magnetic signal  
4     from a magnetic recording medium, ~~wherein the first magneto-resistive effect element includes~~  
5     including a first magneto-resistive effect film, an upper shield film disposed above the first  
6     magneto-resistive effect film, and a lower shield film disposed below the first magneto-resistive  
7     effect film, wherein the first magneto-resistive effect film, the upper shield film, and the lower  
8     shield film are being stacked on said substrate; and

9                   a second magneto-resistive effect element dispose adjacent to the first magneto-  
10    resistive effect element and configured to measure an amount of lapping of the first magneto-  
11    resistive effect element along the slider surface, ~~wherein said the~~ second magneto-resistive effect  
12    elements ~~includes having~~ a second magneto-resistive effect film and is substantially the same in  
13    structure as the first magneto-resistive effect element,

14                  wherein the first magneto-resistive effect film and the second magneto-resistive  
15    effect film are formed substantially coplanar.